VIA E-MAIL AND FIRST CLASS MAIL

(b) (6)

December 29, 2009

Ms. Monika Rice Brenner
Chief, Valuation and Special Programs Branch
Regulations and Rulings, Office of International Trade
U.S. Customs and Border Protection
Mint Annex
799 9th Street, NW
Washington, DC 20229

Re: **Conversion to Request for Final Determination of Advisory Ruling Request
for Country of Origin Determination (H059875)–
Avaya Unified Communications Solution**

Dear Ms. Brenner:

On behalf of our client, Avaya Inc., 211 Mt. Airy Rd., Basking Ridge, New Jersey 07920
("Avaya"), and pursuant to conversations with you, (b) (6)
and in accordance with your letter dated November 17, 2009, we are submitting this request
to convert to a request for a final determination pursuant to Subpart B of title 19, C.F.R. part
177, our request dated May 5, 2009, for an advisory ruling regarding the country of origin
for purposes of government procurement under Title III of the Trade Agreements Act of
1979, Public Law 96-39, of components and an end product to be assembled at a user's
premises which is designated as the Avaya Unified Communications solution. Your office
assigned case number H059875 to our advisory ruling request.

The details of the end-product, its components, countries of origin of materials and
components, and the various assembly operations, are detailed in our original request, a copy
of which, without its extensive enclosures, is enclosed with this request.

We continue to request confidentiality for all pricing and cost information provided, as
outlined in our original request.

BAKER & MCKENZIE

We understand that your office believes that a conference would be useful, and we are in the process of making arrangements with (b) (6) In the meantime, if you require additional information, please do not hesitate to contact (b) (6)
(b) (6)

Sincerely,

(b) (6)

Counsel for Avaya Inc.

Enclosure

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> **CONTAINS BUSINESS**
> **CONFIDENTIAL INFORMATION**
> CONFIDENTIALITY REQUESTED FOR ALL
> COST INFORMATION AND FOR ANY
> ATTACHMENTS WHICH SHOW COST OR
> DETAILED ASSEMBLY INFORMATION

VIA OVERNIGHT COURIER

May 5, 2009

Executive Director
Office of Regulations and Rulings, Office of International Trade
U.S. Bureau of Customs and Border Protection
Mint Annex
799 9th Street, NW
Washington, DC 20229

Attention: Valuation and Special Programs Branch

Re: **Advisory Ruling Request for Country of Origin Determination --**
        Avaya Unified Communications Solution

Dear Sir/Madam:

On behalf of our client, Avaya Inc., 211 Mt. Airy Rd., Basking Ridge, NJ 07920 ("Avaya"),
we are submitting this request for an advisory ruling pursuant to Subpart B of title 19, C.F.R.
part 177, regarding the country of origin for purposes of government procurement under
Title III of the Trade Agreements Act of 1979, Public Law 96-39, of components and an end
product to be assembled at a user's premises which is designated as Avaya Unified
Communications solution.

Unlike the typical ruling request which involves a single imported article, this ruling request
involves numerous electronic components which are imported and then assembled and
integrated at an end user's own premises using software known as *"Communication
Manager."* This *Communication Manager* software provides functionality for the end
product -- an integrated, Unified Communications solution. Some of the individual
components may have limited functionality without *Communication Manager*, others have
no functionality without *Communication Manager*. However, when they are integrated
through *Communication Manager*, the completed end product has full functionality and
performs as described below.

We request confidentiality for all pricing and cost information provided. We have placed
confidential information in bold brackets ([ ]) in the text of this letter and identified
individual tabs which contain confidential information which could harm Avaya's
competitive position if released. To the best of our knowledge and belief, this issue is not

currently pending before U.S. Customs and Border Protection ("CBP")[1], nor is it pending in the U.S. Court of International Trade or the U.S. Court of Appeals for the Federal Circuit.

Avaya and/or its supply chain partners is the manufacturer, producer and/or importer and wholesaler of the various components and subassemblies. Avaya and/or its partners will perform the final assembly and integration operations in the United States at the end user's premises. Accordingly, Avaya is a "party-at-interest" under 19 C.F.R. § 177.22(d) (2008).

For the reasons given below, we believe that the country of origin of the programmed components and the end product assembled at an end user's premises, a Unified Communications solution, is the United States, because the imported articles are substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which they were so transformed. If you disagree with this conclusion, we would appreciate an opportunity to meet with you prior to issuance of any ruling.

To assist in understanding the technical "jargon" contained in this request, we have prepared Tab 1, a list of the abbreviations and acronyms used throughout this request together with their definitions.

The End Product and Components

The end product at issue is a Unified Communications solution which is assembled to completion at an end user's premises in the United States by trained technicians. The programing, assembly and installation of a system will typically take approximately a month to complete, as detailed at Tab 5. A schematic of a typical installation at an end user's premises is shown in Tab 2.

Software

The integration of the individual components is achieved through the use of software called *Communication Manager*, which adds functionality to certain individual components and changes functionality of other components. Although each installation at an end user's premises is different, due to the end user's needs, each system will consist of at least the following components: server, media gateways, circuit packs and IP telephone sets. Enclosed as Tab 3 is a table that shows what functionality major components have with and without the integration through *Communication Manager*. Tab 4 contains an in-depth discussion of *Communication Manager's* features.

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[1] For convenience, CBP will be used to refer to both U.S. Customs and Border Protection and the former U.S. Customs Service except in quoted material.

Avaya's *Communication Manager* software is developed and tested exclusively by Avaya in Denver, Colorado. Avaya employs a team of an average of [350 people] who are dedicated to developing, maintaining and enhancing the *Communication Manager* software. Avaya began development of *Communication Manager* in 2002. Since that time, Avaya has spent (b) (4) in the development and maintenance of *Communication Manager* as its flagship software product. Avaya has spent a total of (b) (4) (b) (4) to date for the development of *Communication Manager*. Avaya charges an average of (b) (4) for *Communication Manager*. A typical installation has the software costs set forth in the table enclosed as Tab 6.

Communication Manager is the open, highly-reliable and extensible IP Telephony software foundation on which Avaya delivers Unified Communications to large and small enterprises. *Communication Manager* can control and expand a system from fewer than 100 users to as many as 36,000 users on a single system and to more than one million users on a single network.

Communication Manager is designed to run on a variety of Linux-based media servers. Linux is an open source operating system. *Communication Manager* provides centralized call control for a resilient, distributed network of media gateways and a wide range of analog, digital, and IP-based communication devices. It also has several advanced applications built-in, including mobility applications, call center features, advanced conference calling, and Enhanced emergency 9-1-1 capabilities. *Communication Manager* is the foundation for building complete enterprise communication networks by supporting SIP, H.323 and other industry-standard communications protocols over a variety of different networks. This protocol support provides centralized voice mail, attendant operations, and call centers across multiple locations.

Communication Manager provides users with the following benefits:

- A strong communications platform for solving business problems today, while preparing for new technologies;

- A multi layered approach towards high availability, survivability and resiliency providing automatic recovery from system, hardware and network failures;

- Strong interoperability with 3rd party software and hardware because of open standards support;

- Secure IP Telephony infrastructure plus simple security management to conform to the customer's security requirements;

- Total Cost of Ownership reduction due to ability to flatten, consolidate and extend communications networks using dial plan support of up to 13 digit extensions and other key capacity improvements;

- Consistent operations by preserving the same dial plan across the enterprise whether the system operates in normal operation or survivable remote operation;

- Cost effective voice conferencing via Expanded Meet-Me Conferencing, basic and low cost conferencing solution for up to 300 parties;

- Interoffice mobility enhanced as users can log into telephones at multiple locations and download their personal extension profile (to phones of the same type), including features, button layout, personal features when *Communication Manager*-based systems are networked using QSIG;

- Accessibility enhancements delivering on the Avaya commitment to enable all employees with the tools needed to communicate effectively; and

- One-number accessibility delivered by bridging calls that come to an office extension to any digital cellular telephone.

Hardware

Each Unified Communications solution consists of media servers, media gateways, circuit packs and IP telephone sets in varying quantities of each depending on the size of the end user. Those components are integrated, as more fully explained below, through *Communication Manager*. The component summaries below describe the functionality of each component when coupled with *Communication Manager*. As indicated above, Tab 3 has a table describing the functionality of each component with firmware only and with *Communication Manager*. As you can see, most components have no functionality without *Communication Manager*. The others have limited functionality, but require *Communication Manager* integration to fully function. (Also, please *see* Tab 7 for a brochure explaining Avaya's hardware.)

1. Media Servers (also referred to as servers)

Each Communication Solution consists of one or more media servers. Some servers (model S8300, for example) are in the form of "blades." These are cards (similar to printed circuit cards with components) that are fit or assembled into Media Gateways, while others (such as S8510, S87xx) are standalone units. Each server is described below.

1a. S8300 Server

The S8300 Server resides inside a G700, G450, G350 or G250 Media Gateway. It can be used as a standalone communication system or as a fully survivable remote gateway. The S8300 can be the primary controller for up to 50 remote G250, G350, G450 and G700 Media Gateways.

As with the S8400, S8500 and S8700 series Servers discussed below, the S8300 supports the Linux operating system and it is powered by *Communication Manager,* which is programmed onto a solid state drive (SSD) at the end user's premises when the system is assembled as part of the installation and integration process. It supports industry standard call control, quality of service, management functions, and IP, digital, and analog endpoints.

The S8300 Server provides the following functionality when coupled with *Communication Manager*:

- Increases productivity by providing advanced headquarters functionality to remote locations;

- Maximizes communication uptime with fully survivable gateways;

- Reduces overall costs by leveraging existing communications infrastructure;

- Saves time and money by managing all sites from a single system interface;

- Simplifies installation with an integrated messaging solution; and

- Decreases the communication closet space required.

1b. S8400 Server

The S8400 Media Server consists of a TN8400 hardware/software platform. TN8412AP SIPI circuit pack. Avaya *Communication Manager,* and optionally IA770 messaging software. The server is available in two configurations: New Customer package and a Migration Hardware package.

- The New Customer package includes the S8400 Media Server. S8400 IP Interface. and a G650 Media Gateway.

- The Migration Hardware package includes the S8400 Media Server and the S8400 IP Interface (TN8412).

S8400 Media Server supports the messaging. call center and wireless solutions currently supported on Avaya Linux servers. *Communication Manager* will be loaded onto a solid state drive at the end user's premises as part of the installation and integration process.

The S8400 Media Server uses the TN8412AP S8400 IP Interface circuit pack to provide:

- Circuit pack control within its port network

- Cabinet maintenance

- Tone-clocks

- Emergency transfer switch functionality

- Customer/external alarms

The included IA770 integrated messaging application supports the equivalent of 8 ports of voice messaging simultaneously. and up to 450 light duty users.

The S8400 Server provides the following functionality when coupled with *Communication Manager*:

- A cost-effective system with easily installed enhancements to accommodate a growing enterprise:

- Applications to improve customer service and increase productivity:

- Flexible IP Telephony migration options;

- Investment protection by reusing many components; and

- Easy migration of system translations thereby reducing migration down time.

1c. S8510 Server

The S8510 Server brings all of the robust performance and rich feature set of *Communication Manager* Release 5.1 or later release onto an industry standard processor running an industry standard operating system. This processing engine drives the switching fabric of the system. The S8510 Server uses an Intel Xeon® processor and runs the Linux operating system. The simplex S8510 Server is 1 U high and fits into a 19" four-post data rack.

In new system sales, the S8510 Server will be sold with the G650 Gateway as well as with the G700, G450, and G350, and G250 H.248 Gateways. Customers that are currently on Avaya legacy systems such as the DEFINITY® Server SI, R (Direct Connect only - no Center Stage Switch), CSI, and S8100 can easily migrate to the S8510 Server and maintain their current Gateways (*e.g.*, CMC, SCC1, MCC1, G600). The S8510 Server supports IP Port Network Connectivity for new sales and Direct Connect for SI/R migrations. Center Stage connectivity is not supported on the S8510 Server.

The S8510 Server provides the following functionality when coupled with *Communication Manager*:

- Supports distributed IP in a smaller scale;

- Provides a higher capacity Local Survivable Processor for large remote sites of a distributed enterprise;

- Provides enterprise survivability by serving as a "regional" survivable server for multiple H.248 gateways; and

- Supports RAID Level 1, which allows continued operations in the event of a disk failure.

Communication Manager will be installed in the S8510 on a hard drive as part of the installation and integration process at the end user's facility.

1d. S8730 Server

The S8730 Server, a new version of the Avaya flagship S87XX product line, reflects the Avaya core Server strategy to deliver on the price/performance promise of the Avaya Communication Architecture by regularly updating our server platforms to take advantage of new technologies and performance improvements.

The S8730 Server is based on the powerful AMD Opteron processor with an Enterprise Linux operating system. The S8730 Server with *Communication Manager* 5.0 provides a solid foundation for a highly flexible converged solution that meets a variety of telephony needs. As with all S87XX Series Servers, the entire server complex is duplicated. This increases overall system availability and minimizes the risk of one component causing a failure. Additionally, the S8730 Server comes equipped with RAID level 1 controllers and an optional 2nd RAID hard disk drive. A second power supply is also optional on the S8730 Server.

The S8730 Server is available in two configurations: with Hardware Duplication (requiring the two DAL2 duplication boards[2]) or with Software Duplication (no DAL2 boards needed). With Hardware Duplication, the S8730 Servers can be separated up to 10 kilometers (6.3 miles) to help ensure business continuity. With software duplication the S8730 server separation distance is governed by the capacity and quality of the duplication link. For software duplication to function properly, the minimum network requirements for the duplication link are:

- 1 GB ethernet link, minimum
- 8 ms round trip delay, maximum
- 0.15% roundtrip packet loss, maximum

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[2] The DAL2 is a duplication memory card. The DAL2 card has 512 MB of memory, compared to 256 MB of memory on the DAL1 duplication memory card. The extra memory is needed to accommodate the increase in shadowed memory size. The DAL2 cards are used in pairs, one in the Active server and another in the Standby server. The DAL2 operates in two modes, Active mode and Standby mode. The DAL2 supports one-way memory shadowing. Critical data is transferred from one DAL2 to another via a fiber link. When a processor writes into the memory of the DAL2 in the active server, the write is also sent over the fiber link to the other DAL2 card in the standby server. The DAL2 is field replaceable.

The S8730 Server, with hardware duplication, can process up to 600,000 Busy Hour Call Completions (BHCC) in a general call type mix. The BHCC for the S8730 with Software Duplication is approximately 250,000 in a general call type mix.

The S8730 can support up to 36,000 stations and 44,000 ports, up to 16,000 IP endpoints (which is a cumulative total of IP trunks, IP stations and SIP trunks), and 8,000 trunks enabling it to support large multi-national corporations and contact center operations.

The S8730 Server provides the following functionality when coupled with *Communication Manager*:

- With 99.999% reliability and redundancy, the S8730 Media Server enables highly reliable solutions over IP;

- Software duplication provides flexibility and choice of redundancy configurations;

- High capacity call processing server can handle the most demanding business environment;

- Common software base optimizes integration into existing networks and eases upgrades;

- Scalable architecture provides virtually unlimited growth options;

- Redundancy options provide high availability support;

- Unified System Management Tools facilitate improved management efficiencies; and

- Being standards based provides opportunity for integration of custom developed applications.

Communication Manager will be installed in the S8730 on a hard drive as part of the installation and integration process at the end user's facility.

2. Media Gateways

2a. G250 Media Gateway

This is a powerful branch communication solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN gateway and a high-performance LAN switch into a compact, 2U high 19" rack mount unit. The G250 Gateway extends the enterprise communications capabilities in the headquarters location out to a branch location and is ideally suited for branch locations needing from 2 to 14 extensions. The system gains its functionality from a centralized Avaya Media Server running Avaya *Communication Manager*, but has several survivability options that allow communications to continue operating even if the connection to the main server is lost for any reason.

An advanced TDM/IP architecture provides seamless connectivity and communications between a wide variety of analog, digital, H.323, and SIP-based IP telephony devices and applications. To enhance security, the G250 can secure VoIP media streams using Advanced Encryption Standard (AES), approved for use by U.S. Government agencies to protect sensitive information.

The Avaya G250 also functions as an edge router to support the consolidation of voice and data traffic over an IP network. Optional IP WAN routing media modules add support for PPP/Frame Relay connectivity over E1/T1 or Universal Serial Port (USP) interfaces. The G250 media gateway can also connect to an external WAN device via a fixed 10/100 Ethernet WAN router port, which supports traffic shaping to match data transfer rates with available WAN bandwidth.

The G250 Media Gateway provides the following functionality when coupled with *Communication Manager*:

- Headquarters Communications Extended to the Branch: The G250 allows enterprises to extend their enterprise communications applications out to their branch office locations to facilitate productivity and collaboration at the branch offices.

- Communications Continuity: The gateway provides branch office users with a highly resilient system that continues to provide communications capability even if the connection between the branch office and primary headquarters is lost. There are a variety of options available to preserve critical communications continuity at the branch location.

- Converged All-in-One Unit: The G250 integrates telephony, routing, and data switching into one box, reducing the overhead and complexity of managing disparate gateways, routers, and switches.

- Centralized Applications Management: The resources required to manage branch communications are significantly reduced as the gateway extends a single centralized set of communications applications to the branch.

- Remote Deployment and Management: The G250 is easily installed and remotely configured by a central support staff, allowing the enterprise to get branch offices operational quickly and cost-effectively.

2b. G350 Media Gateway

This is a powerful converged networking solution that packs an IP telephony gateway, an advanced IP WAN router, a VPN Gateway and a high-performance LAN switch into a compact (3U) modular chassis. Designed to be a complete voice/data networking solution, the G350 Gateway is ideally suited for enterprises with distributed branch office locations

using 8-72 extensions. Enterprises benefit long-term by leveraging existing telephony investments while supporting an evolution to recent protocols such as H.323 or SIP-based telephony.

An advanced TDM/IP architecture provides seamless connectivity and communications between a wide variety of analog, digital, H.323, and SIP-based telephony devices and applications. For communications security, the G350 can secure VoIP media streams using Advanced Encryption Standard (AES), approved for use by U.S. Government agencies to protect sensitive information.

The Avaya G350 is also an edge router designed to support the consolidation of voice and data traffic over IP. Available IP WAN routing media modules add support for PPP/Frame Relay connectivity over E1/T1 or Universal Serial Port (USP) interfaces. Alternatively the G350 media gateway can connect to an external WAN device via a fixed 10/100 Ethernet WAN router port, which supports traffic shaping to match data transfer rates with available WAN bandwidth.

The G350 Media Gateway provides the following functionality when coupled with *Communication Manager*:

- Converged All-in-One Device: The G350 integrates telephony, routing, and data switching into one box, reducing the overhead and complexity of managing disparate gateways, routers, and switches.

- Networked Telephony: The Avaya networked server/gateway architecture allows enterprises to design and administer telephony services for all remote branch office locations from one central location.

- Centralized Applications for the Branch: The G350 supports a model allowing capabilities like messaging and call center to be extended to the branch with the benefits of centralized management.

- Multiple Network Survivability Options: The G350 provides branch office users with a highly resilient system that continues to provide telephony call control even if the connection between the office and primary headquarters is lost.

- Deployment Flexibility: Seamless TDM/IP support allows enterprises to take an evolutionary approach to IP telephony migration by maximizing investment protection for existing analog and digital devices.

- Remote Deployment and Management: The G350 can be easily installed and remotely configured by a central support staff, allowing the enterprise to get branch offices operational quickly and cost-effectively.

2c. G450 Media Gateway

The Avaya G450 Media Gateway consists of a 3U high, 19" rack mountable chassis with field-removable Supervisor Main Board Module, Power Supplies, Fan Tray, DSP resources and memory. It has eight Media Module slots that host a combination of interface boards to support T1/E1, ISDN-BRI, WAN interfaces, digital or analog telephones and analog trunks. The first Media Module slot can also host an S8300 Server (*see* above) to provide integrated IP Telephony for standalone businesses or mission-critical survivability for branch office-deployed G450s.

Important G450 capabilities include:

- Field-replaceable Main Board Module supports optional DSP and Memory add-ons. Built-in interfaces include two 10/100/1000 Base-T LAN ports, two 10/100 Base-T WAN ports, two USB ports, console and services ports, contact closure adjunct port, and an ETR port (for emergency calls during power failures).

- Modular DSP Resources are available as daughterboards for Main Board Module. These daughterboards can be implemented in 20 or 80 channel increments. The maximum capacity is 240 channels. Codecs supported include G.711, G.729, and G.726.

- Robust TDM Capabilities for scalability and deployment flexibility including 240 voice channel capacity, 192 analog or digital (DCP) ports, up to 8 T1/E1s up to 10,000 Busy Hour Call Completions.

- High-resiliency features such as dual, redundant, load-sharing power supplies; modular fan tray, standard Local Survivability and Enhanced Local Survivability (with S8300 Server).

- Basic routing capabilities including OSPF, RIP, PPP, Frame Relay and VRRP support. Available IP WAN routing media modules add support for PPP/Frame Relay connectivity over E1/T1 or Universal Serial Port (USP) interfaces. The G450 can also connect to an external WAN device via fixed 10/100 Ethernet WAN router ports, which support traffic shaping to match data transfer rates with available WAN bandwidth.

- Enhanced Quality of Service including Dynamic Call Admission Control for improved bandwidth utilization and Respond Time Report for better WAN monitoring.

- Advanced Security including VPN support, SRTP encryption, SSH/SCP, SNMP v3 support, secrets management.

The G450 Media Gateway provides the following functionality when coupled with *Communication Manager*:

- Robust resiliency features that help maintain business continuity;
- Deployment flexibility that helps lower total cost of ownership through hardware standardization;
- Scalable, high capacity platform that provides investment protection;
- Enhanced serviceability that lowers total cost of ownership; and
- Enhanced security that protects sensitive information.

2d. G650 Media Gateways

The G650 Media Gateway features an 8U high, 14-slot chassis that can be installed in industry standard EIA-310 19", 24", or 600 mm ETSI open or closed racks. The G650 can accommodate a range of analog, digital, ISDN, and IP (over the LAN) phone station configurations, with voice transport options over IP, analog, TDM, or ATM. Available dual redundant, load-sharing power supplies with AC/DC inputs provide enhanced system reliability. For scalability, up to five G650 Media Gateways can be stacked together using a TDM/LAN cable and a built-in connector in the back of the chassis to form a high-capacity port network.

For call control, the G650 Media Gateway connects to an external S8500 or S8700 Media Server over an IP link using the TN2312BP IP Server Interface (IPSI). For mission-critical applications, G650 port networks can be configured for IPSI duplication, which provides fault-tolerant duplicated control paths to the media server. This feature introduces a high-availability option for enterprises with existing mission-critical voice systems that want to migrate to an IP transport solution without compromising system reliability and availability.

The G650 Media Gateway provides the following functionality when coupled with *Communication Manager*:

- Supports multi-protocol environments where enterprises have a requirement for concurrent support of TDM and IP-based telephony;
- Provides an evolutionary approach to mixed TDM/IP or IP telephony for enterprises with traditional TDM-based infrastructures to provide greater return on investment (ROI) by leveraging their existing investments;
- Provides a standard migration and expansion platform for some existing Avaya Media Gateways that enables the easy integration of voice and data infrastructure over a standard 19-inch data rack;

- Supports a variety of connectivity and availability options, allowing for easy integration into existing voice networks; and

- Support for T.38 Fax and Modem over IP so that non-IP communications can travel over IP telephony links.

3. Circuit packs

A circuit pack (also known as a circuit card, circuit board, printed circuit) is an electronic circuit consisting of one or more electronic components arranged on a substrate board or card with one or more conductive layers laminated on one or more insulating layers. The electronic components on the circuit pack can be inserted into holes (*e.g.*, through-hole mount) or surface mounted on conductive pads (*e.g.*, surface mount) using various alloys of metal called solder. Such circuit packs usually have one or more connectors to integrate them into the system of which they are a part.

Avaya's circuit packs are not stand-alone devices. They are inserted as components to Avaya's Media Gateway units. Avaya offers two types of circuit packs – a "TN" card and an "MM" card. TN circuit packs are based on older technology for use in legacy telephony systems. MM circuit packs are based on newer technology.

3a. Telephone Interface Cards ("TN Cards")

A TN card provides physical station and trunk interfaces, and media-processing circuitry. It measures approximately 8" x 13" for insertion into AT&T, Lucent and/or Avaya telecom systems featuring a 200 pin edge connector. Below is a list of TN Cards offered by Avaya as components in a Unified Communications Solution:

- TN799DP C-LAN

- TN2312BP IP server interface (IPSI) circuit pack

- TN2302AP IP media processor (for voice over IP processing)

- TN2602AP IP media resource (for voice over IP processing)

- TN801B MAP-D LAN Gateway

- TN2501AP Voice Announcement over LAN (VAL)

- TN2147 Central Office Trunk 8 Port

- TN2185 ISDN-BRI S/T-TE interface (4-wire, 8 ports)

- TN2147 Central Office Trunk 8 Port

- TN2198 ISDN-BRI U interface (2-wire, 12 ports)

- TN2224 DCP digital line (2-wire, 24 ports)

- TN2464 DS1 interface with echo cancellation,T1/E1 - International Version

- TN429 Incoming Call Line Identification (ICLID)

- TN464 DS1 interface, T1 (24 channels) or E1 (32 channels)

- TN465 Central Office trunk (8 ports) - supports multiple countries

- TN556 ISDN-BRI 4-wire S/T-NT interface (12 ports)

- TN744 Call Classifier and Tone Detector (8 ports)

- TN747 Central Office Trunk (8 ports) for loop- or ground-start CO, foreign exchange (FX), and wide area telecommunications service (WATS) trunks and supports the abandoned call search feature in automatic call distribution (ACD) applications

- TN753 Direct Inward Dialing Trunk (8 ports)

- TN755 Neon Power Unit - produces 150 VDC to operate neon message waiting lights on terminals that are connected to TN746B analog line circuit packs

- TN760 Tie Trunk (4-wire, 4 ports) - provides release link trunks that are required for the Centralized Attendant Service (CAS) feature and has administrable A- and Mu-Law companding. Also supports outgoing, Multilevel Precedence and Preemption (MLPP)

- TN763 Auxiliary Trunk (4 ports) - used to access on-premises applications such as music on hold, loudspeaker paging, code calling, and recorded telephone dictation

- TN771 Maintenance and Test

- TN793 Analog Line with Caller ID for multiple countries (24 ports)

- TN8412 S8400 IP Interface (SIPI) provides transport of control messages between S8400 server and the server's port network

3b. Media Modules ("MM")

Similar to TN circuit packs, MMs are based on newer technology and connect differently to the media gateways. They are compatible with Avaya's G250, G350, G430, and G450 series of H.248-based Media Gateways. The circuit functionality provided by MM cards is similar to that of some TN cards (physical station and trunk interfaces, and media-processing circuitry). However, the card outline and connector definitions are different than TN cards (which are designed for our traditional port network vehicles, the most current of which is the G650). Below is a list of MMs offered by Avaya:

- MM710 one T1/E1 port

- MM711 universal 8 ports analog

- MM714 4 lines + 4 trunks analog ports
- MM716 24 analog lines port
- MM720 8 BRI ports
- MM722 2 BRI ports
- MM712 8 DCP ports
- MM717 24 DCP ports

4. Telephone Sets

It should be noted that until the IP (Internet Protocol) telephones listed below are integrated through *Communication Manager*, they have <u>no</u> functionality.

4a. 1600 Series IP Telephones

The 1600 Series IP Telephones - Avaya one-X™ Deskphone Value Edition is a family of cost-effective IP Telephones that deliver familiar features at an attractive price point for customers with basic communications needs. The family includes a portfolio of phones designed to meet a range of end user needs including the call center. Designed as a stand-alone portfolio, these telephones may be intermixed with other Avaya IP telephones, especially the Avaya one-X™ Deskphones (9600 series). Combining the features of traditional telephones and the latest in telephone user experience, 1600 Series IP Telephones - Avaya one-X™ Deskphone Value Edition telephones provide critical capabilities not often found in competitively priced models.

4b. 4600 Series IP Telephones

The standards-based Avaya 4600 Series IP Telephones bring the rich features and functions of Avaya *Communication Manager* directly to the desktop, while also supporting desktop applications above and beyond telephony. Several models are available, ranging from entry-level voice over IP phones to those built specifically for demanding contact center environments, to sophisticated color-display screenphones.

The 4600 Series voice over IP business telephones can be deployed in traditional office environments as well as remotely via an integrated VPN client and are easily configured to support both the H.323 protocol as well as SIP.

4c. 5600 Series IP Telephones

The standards-based Avaya 5600 Series IP Telephones, developed specifically to meet the needs of small and medium businesses, bring rich features and functions directly to the desktop, while also supporting desktop applications above and beyond telephony. Several

models are available, ranging from entry-level IP telephones to those built specifically for demanding contact center environments. The 5600 series IP telephones are for use with the Avaya IP Office system.

4d. 9610 IP Telephone

The Avaya 9610 IP Telephone, part of the Avaya one-X™ Deskphone Edition family, is designed for a "walk-up" user profile, for use in common areas such as building lobbies, break rooms and hallways.

In all instances, the 9610 should not be associated with a single end user's desk, but rather will be shared by visitors and building employees. With a large display and built-in web browser, the 9610 provides intuitive access to simple applications such as building directories, visitor information, news and events. The 9610 supports a single call appearance and per the walkup profile - does not support hold, conference or transfer.

4e. 9620 IP Telephone

A member of the Avaya one-X™ Deskphone Edition family, the 9620 IP Telephone is specifically designed for the everyday telephone user—those who rely on multiple communications tools such as e-mail and IM, yet still require a high quality and intuitive telephone for voice communications.

4f. 9630 IP Telephone

A member of the Avaya one-X™ Deskphone Edition family, the 9630 IP Telephone is specifically designed for the essential telephone user, where the telephone is necessary in order for them to complete their job. Sales people, relationship managers, and attorneys are typical examples of the essential users profile. The 9630 provides superior, high fidelity audio, built in "one touch" access to key Avaya *Communication Manager* mobility features, protocol independence (H.323 and SIP) and a stylish professional design. The 9630G model has the same functionality as the 9630, and adds native support for Gigabit Ethernet.

4g. 9640 IP Telephone

A member of the Avaya one-X™ Deskphone Edition family, the 9640 IP Telephone with high resolution color display is specifically designed for the essential telephone user. Essential users are those who deem the telephone as essential for doing their jobs. Sales people, relationship managers, and attorneys are typical examples of essential users. The 9640 provides superior high fidelity audio, built-in "one touch" access to key Avaya *Communication Manager* mobility features, protocol independence (H.323 and SIP) and a stylish and professional design. The 9640G model has the same functionality as the 9640, and adds native support for Gigabit Ethernet.

4h. 9650 IP Telephone

A member of the Avaya one-X™ Deskphone Edition family, the 9650 IP Telephone is specifically designed for the "navigator" telephone user. Navigators, such as building receptionists and executive admin staff, manage calls for themselves and for groups of people as a big part of their jobs. The 9650 features built-in button module functionality with one-touch access to bridged appearances, speed dials and feature keys. When used with Avaya *Communication Manager* 4.0, the 9650 supports up to three SBM 24-button expansion modules.

Operations in China

There are 6 main subassemblies that compose the CM solution. Subassemblies made in China include: Gateways, Servers (2 types: blades and standalone units), Media Modules, Telsets, Circuit Packs. The hardware listed above is manufactured by (b) (4) skilled personnel in the People's Republic of China. The raw components for the hardware are obtained from various countries throughout Asia and Europe. Certain gateways are currently also manufactured in Israel and other countries, but will eventually be manufactured in China.

Operations in the United States

As indicated above, Avaya began development of *Communication Manager* in 2002 in Denver, Colorado. Since that time, Avaya has spent (b) (4) in the development and maintenance of *Communication Manager* as its flagship software product. Avaya has spent a total of (b) (4) to date for the development of *Communication Manager*. All the engineering, development, design were developed in the United States. Avaya charges an average of (b) (4) for *Communication Manager*. *Communication Manager* will be installed onto a solid state drive or hard drive residing on the server. It will be custom configured at the end user's facility or another location in the United States to integrate the various components. The transformation of the end product takes place as the software is applied.

The Media Server (*see* discussion of S8300, S8400, S8510 and S8730, above), released with Avaya *Communication Manager* 2.2, reflects Avaya's core Media Server strategy to deliver on the price and performance promise of the Avaya Communication Architecture by regularly updating media server platforms to take advantage of new technologies and performance improvements. A typical installation has the software costs set forth in the table enclosed as Tab 6. Once actual installation begins, approximately 5 days is needed to customize the *Communication Manager* software for the end user. A total of 11 days is required to assemble the necessary equipment, install the hardware, and integrate the hardware and software. (*See* Tab 5 for details.) We have included the procedures for the

S8400 and an installation PowerPoint (Tab 8) which details all the necessary programming, assembly and configuration steps.

As the installation PowerPoints show (beginning at slide 24), the complex installation and integration requires both adjustments to hardware and customized software programming. The *Communication Manager* procedures using the S8400 Server begin at slide 72 and continue to slide 112.

The above assembly operations are complex. We believe the hardware is substantially transformed when the software is added and the system is integrated, due to the number of components assembled, number of different operations, time, skill level required, attention to detail, quality control, the value added to CM, and the overall employment complexity in development of the Software. The assembly, installation and integration steps are outlined in Tab 5.

Several other high technology products have been the subject of country of origin ruling requests from CBP, involving the government procurement provisions of the Trade Agreements Act or the country of origin marking requirements in 19 U.S.C. §1304, or both. In those rulings involving hardware which lacked the functional "intelligence" characteristics present in the completed product, and where the firmware/software provided the merchandise's functionality, CBP determined that the products were substantially transformed into products of the country where the software which provided its functionality was installed and final testing occurred.

Similar to the rulings discussed below, the Avaya communication devices will be partially manufactured in China and assembled to completion at the end user's premises in the United States.

Law and Analysis

Section 304 of the Tariff Act of 1930 (19 U.S.C. §1304), provides that, unless excepted, every article of foreign origin imported into the United States shall be marked in a conspicuous place as legibly, indelibly, and permanently as the nature of the article (or its container) will permit, in such a manner as to indicate to the ultimate purchaser in the United States the English name of the country of origin of the article. Congressional intent in enacting 19 U.S.C. §1304 was that the ultimate purchaser should be able to know by an inspection of the marking on the imported goods the country of which the goods is the product. "The evident purpose is to mark the goods so that at the time of purchase the ultimate purchaser may, by knowing where the goods were produced, be able to buy or refuse to buy them, if such marking should influence his will." *United States v. Friedlander & Co.*, 27 C.C.P.A. 297 at 302 (1940).

Part 134 of the Customs Regulations, 19 C.F.R. Part 134, implements the country of origin marking requirements and the exceptions of 19 U.S.C. §1304. Section 134.1(b), defines "country of origin" as the country of manufacture, production or growth of any article of foreign origin entering the United States. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the "country of origin" within the meaning of the marking laws and regulations. The case of *U.S. v. Gibson-Thomsen Co., Inc.*, 27 C.C.P.A. 267 (C.A.D. 98)(1940), provides that an article used in manufacture which results in an article having a name, character, or use differing from that of the constituent article will be considered substantially transformed and, as a result, the manufacturer or processor will be considered the ultimate purchaser of the constituent materials. In such circumstances, the imported article is excepted from marking and only the outermost container is required to be marked. *See* 19 C.F.R. §134.35(a).

A product which undergoes the type of change contemplated in *Gibson-Thomsen (i.e.,* to an article with a new and different name, character or use) is deemed to have undergone a substantial transformation, and, therefore, the country of origin of that product is where the substantial transformation occurs. That *Gibson-Thomsen* test has been codified in the government procurement provisions of the *Trade Agreements Act of 1979*, 19 U.S.C. §2518(4)(B), which provides that:

> An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of the country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

The implementing regulations for this provision are found in 19 C.F.R. Part 177, Subpart B and the Federal Acquisition Regulations ("FAR") Part 25. Thus, the substantial transformation test for government procurement uses language that is virtually identical to that developed in *U.S. v. Gibson-Thomsen Co., Inc., supra.* Accordingly, we believe the result would be the same for government procurement purposes.

As the cases set forth below demonstrate, in order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes such determinations on a case-by-case basis. The country of origin of the item's components, extent of the processing that occurs within a country, and whether such processing renders a product with a new name, character, or use are primary considerations in such cases. Additionally, factors such as the resources expended on product design and development, extent and nature of post-assembly inspection and testing procedures, and worker skill required during the actual manufacturing process will be considered when determining whether a substantial transformation has occurred; however, no one factor is determinative.

CBP and the courts have also considered whether components of various origins have been substantially transformed during the assembly of other automated data processing products. We believe that the guidance supplied by such cases may be applied to resolve the issues in this case as well.

In 1982, the U.S. Court of International Trade decided the case of *Data General v. United States*, 4 Ct. Int'l Trade 182 (1982), which involved the programming of a PROM. In *Data General*, the Court held that a PROM chip which was manufactured in one country, but programmed in another was substantially transformed and became a product of the country of programming (in that case, the United States). The court noted that it was undisputed that programming alters the character of a PROM, effecting a physical change. The essence of the article, its interconnections or stored memory, is established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device possessing a desired distinctive circuit pattern constituted "substantial transformation."

CBP has over the years extended *Data General* to other programming operations and has employed similar rationale in several analogous rulings. With regard to processing involving programming activities involving hardware, the rulings below indicate that CBP has looked to see whether the programming provides the article's functionality and defines the character and use of the product for its intended purpose. Programming which does this "may be deemed to be complex and meaningful." (*See* Headquarters Ruling ("HQ") 562964, *infra.*) In more recent rulings involving the importation of automatic data processing basic hardware assemblies which had the essential character of the finished product, but lacked the functional intelligence characteristics and functionality that would be present in the completed units, CBP held that the "software code installation, subsequent integration, and testing" provided the functionality and resulted in a substantial transformation. (*See* New York Ruling ("NY") N026376, and other rulings, *infra.*)

For example, in HQ 732087 (February 7, 1990), CBP ruled that a blank computer diskette was substantially transformed by having a program written onto it and the party performing the programming was considered the ultimate purchaser of the blank diskette for country of origin marking purposes. CBP noted that the character of the diskette had changed from one of a blank storage medium to one with a predetermined pattern coded onto it. The use of the diskette had changed from that of an unreadable, therefore meaningless, article of software, to that of an encoded instruction guide to enable a computer to perform various commands. *See also* HQ 733085 (July 13, 1990) and HQ 558868 (February 23, 1995) (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system and the programming is a permanent change that cannot be undone); HQ 735027 (September 7, 1993) (programming blank media (EEPROM) with instructions on it that allows it to perform certain functions of preventing piracy of software constituted substantial transformation); HQ 732870 (March 19, 1990) (determining that formatting a blank diskette did not constitute substantial transformation because it does not

add value, does not involve complex or highly technical operations and does not create a new or different product).

In HQ 562964 (March 29, 2004), which involved SCSI (Small Computer System Interface) tape drive rack units for use in networks, CBP stated,

> [t]he OEM proprietary firmware is burned into the drives in Country X after the drives have been tested to insure they are able to receive instructions with the universal program. The OEM firmware allows the tape drives to be recognized and controlled by the OEM's network. As such, *this programming defines the character and use of the tape drive as a network storage device for the ultimate purchaser's network.* In addition, the programming greatly increases the value of the tape drive and increases the cost of assembly in Country X. Although the burning in of the firmware is not itself a complex process, *it involves changing the tape drive from a blank storage device, capable only of being tested, to a network-controlled storage device.* We believe such programming is akin to the programming of the blank media in *Data General,* as well as the SecureID card and anti-piracy software programmed into the EEPROM in the CBP rulings cited above. *As such, we believe this assembly process may be deemed complex and meaningful.* Accordingly, we would consider the tape drive rack unit in Scenario 2 to have undergone substantial transformation. (Emphasis added.)

In HQ H014068 (October 9, 2007), which involved a TEMS handheld cellular device which was assembled in China or Malaysia but programmed in Sweden as a testing instrument, CBP stated,

> CBP has long held that the installation (downloading) of software onto a computer diskette amounted to substantial transformation of the diskette because the character of the diskette had changed from one of a blank storage medium to one with a predetermined electronic pattern encoded onto it. The use of the diskette had changed from a meaningless article of software to that of an encoded instruction guide that enabled a computer to perform various commands. *See* HQ 732087, February 7, 1990. *See also,* HQ 735027 (September 7, 1993) concerning the country of origin marking requirements for "MemoPlugs", the hardware of which was imported into the U.S. and then programmed with anti-piracy software. *See generally* HQ 968000 (February 14, 2006) regarding substantial transformation of components of foreign origin used in the assembly of various electronic components.

CBP went on to say-

> As was stated in HQ 968000, in order to determine whether a substantial transformation occurs when components of various origins are assembled into

completed products, CBP considers the totality of the circumstances and makes such determinations on a case-by-case basis. The country of origin of the item's components, extent of the processing that occurs within a country, and whether such processing renders a product with a new name, character, or use are primary considerations in such cases. Additionally, factors such as the resources expended on product design and development, extent and nature of post-assembly inspection and testing procedures, and worker skill required during the actual manufacturing process will be considered when determining whether a substantial transformation has occurred; however, no one factor is determinative.

In HQ 968000 (February 14, 2006) and in NY R03637 (April 12, 2006), CBP determined that that the fabric switches involved in the rulings were substantially transformed into products of the United States where they were manufactured in China and assembled to completion with a Fabric Operating System ("FOS") and other software loading and testing performed in the United States.

In NY N017920 (October 31, 2007), CBP also reviewed the country of origin of an SW5300 fabric switch for Storage Area Networks. In that case, the hardware was also assembled in China, and the fabric switch assembly was completed when the FOS and other software was installed and tested in the United States. CBP stated that the processing that occurs within the United States provides the end product with its functionality, storage connectivity management potential, SAN fabric performance monitoring capability (for example, the ability to control multiple switches from a central point), network security and access control, and other features that enable the SW5300 to function as a fully configured network switch. In the United States, the imported hardware subassembly of the SW5300 is substantially transformed into a fully configured network switch. During the assembly process that takes place in the United States, the hardware subassembly becomes a product with a new name, character, and use, specifically, the completed Brocade's SW5300 fabric switch for Storage Area Networks.

In HQ H025023 (April 1, 2008), which also involved a fabric switch, the hardware was assembled in China and the assembly was completed when the FOS, which was developed in the United States was downloaded and installed in the Czech Republic. CBP held that the country of origin was the Czech Republic, the country where the software was loaded. As in the above fabric switch rulings, the programming provided the functionality to the final product.

More recently, in NY N026376 (dated May 21, 2008), Customs determined that the country of origin of a gigabit interface connector ("GBIC") and a small form factor-pluggable ("SFP") mini-gigabit interface connector ("Mini-GBIC") was the United States where in their imported condition, the GBIC and Mini-GBIC units were comprised of basic hardware assemblies and had the essential character of the finished product, but they lacked the functional intelligence characteristics and functionality that would be present in the

completed units. They were referred to as "raw" units. Only after the software was installed into the merchandise did the products become functional. After importation, these "raw" GBIC and Mini-GBIC units underwent further processing in the United States, consisting of software code installation, subsequent integration, and testing. Customs determined that the "intelligence" characteristics found in the completed gigabit interface connector ("GBIC") unit and small form factor-pluggable ("SFP") mini-gigabit interface connector ("Mini-GBIC") unit are imparted by the U.S. based software, customer specific coding and alarm ranges, and read testing that occurred in the United States. The imported gigabit interface connector ("GBIC") unit and small form factor-pluggable (SFP) mini-gigabit interface connector ("Mini-GBIC") unit are substantially transformed into fully configured transceiver modules, which provide an interface connection from open source network switching equipment, such as Ethernet switches, to the fibre or copper cabling structure, during the U.S. assembly process. As such, Customs found this substantial transformation provides the end products with their functionality.

In the instant case, the Avaya Unified Communications solutions are custom assembled to completion in the United States at the end user's premises by installing and integrating all the components by means of *Communication Manager* which provides the functionality. As indicated above, the software was developed (and continues to be improved) at a substantial cost to Avaya (b) (4)   The configuration and software integration operations performed in United States, in our view, substantially transform the raw, non-functional communications devices into devices that are capable of performing the intended functions. To date, Avaya has spent a total of (b) (4)   for the development of *Communication Manager*. The software will be custom configured for the end user in the United States and will be installed and the integrated system will be subjected to extensive testing in the United States. The United States operations result in unique programming which cannot be undone by third parties during the normal course of operation.

The configuration of such software defines the character, operation and use of the Unified Communications solution. The software provides the devices with their distinctive functional characteristics. As such, we believe that, as in the rulings cited above, the programming is a "complex and meaningful" process that changes the communications devices from non-functional or partially functional devices into an intelligent and fully functional communications system which constitutes a substantial transformation, making the country of origin the United States for purposes of government procurement under 19 U.S.C. §2518 and the implementing regulations in 19 C.F.R. Part 177 and FAR Part 25.

For all the foregoing reasons, we respectfully request that you issue an advisory ruling finding that the country of origin for government procurement purposes of the Avaya Unified Communications solution, and replacement components thereto, is the United States. If, for whatever reason, you feel that you cannot rule as requested, the privilege of a conference is requested, prior to the issuance of any ruling. In the meantime, if you require

BAKER & McKENZIE

additional information, please do not hesitate to contact (b) (6)
(b) (6)

Sincerely,

(b) (6)

Counsel for Avaya Inc.

Enclosures as stated.

LIST OF ENCLOSURES

Tab 1.   Glossary of the abbreviations and acronyms.

Tab 2.   Schematic of a typical installation.

Tab 3.   CONFIDENTIAL Table that shows what functionality major components have with and without the integration through *Communication Manager.*

Tab 4.   Description of *Communication Manager Communication Manager* PowerPoint.

Tab 5.   Assembly, installation and integration steps.

Tab 6.   CONFIDENTIAL Table showing software costs.

Tab 7.   Brochure describing servers and gateways.

Tab 8.   CONFIDENTIAL S8400 Installation Guide PowerPoint.

Briefing with

Customs & Border Protection

Final Determination
For
Avaya Unified Communication Solution

March 5, 2010

AVAYA

INTELLIGENT COMMUNICATIONS

KEY POINTS TO CONSIDER

▶ U.S. made software (*Communication Manager*) provides functionality to hardware that would otherwise have little or no functionality.

▶ Each solution and installation effort is tailored to meet the specific needs of each end user.

▶ Installation and integration of foreign-made hardware with U.S.-made software at customer site substantially transforms the hardware.

▶ Significant complexity surrounds the installation and integration of hardware with software.
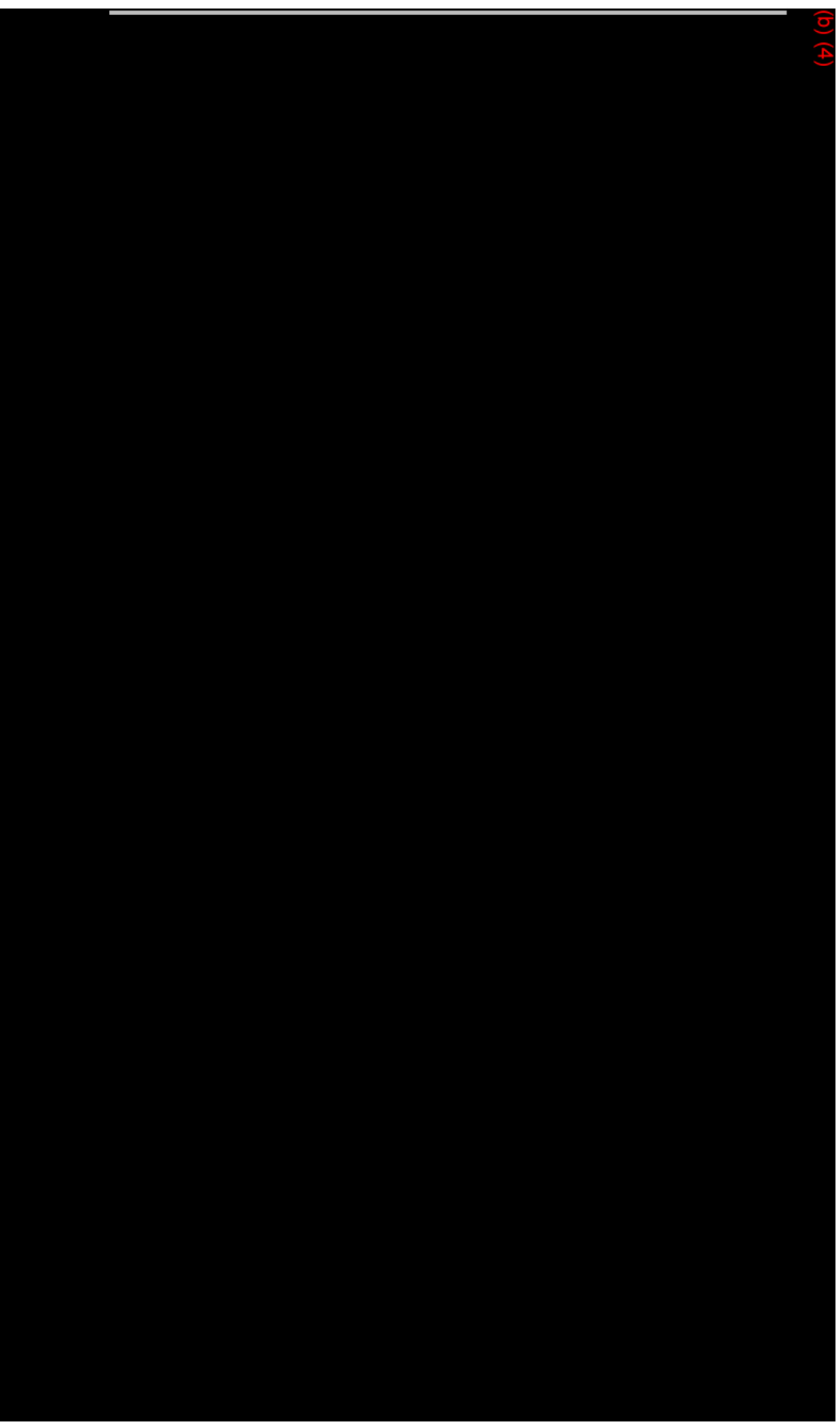
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Avaya Aura™ Communication Manager

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SAMPLE SOLUTION DIAGRAM

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QUESTIONS?

THANK YOU

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